

PATENT SPECIFICATION

1,144,674



DRAWINGS ATTACHED

1,144,674

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COMPLETE SPECIFICATION

Improvements in or relating to Disposable Underwear

I, FLORA PARRAVICINI, of Swiss nationality, of 51, Pflanzschulstrasse, Zurich, Switzerland, do hereby declare the invention, for which I pray that a patent may be granted to me, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention relates to disposable drawers such as underpants, panties or the like, made of cellulose or like non-woven fabrics.

The object of the invention is to provide disposable drawers which can be manufactured cheaply and which are intended to be used once only and then discarded.

According to the invention disposable drawers comprise a blank of cellulose or like non-woven fabric, the blank having front and rear portions on opposite sides of a crotch and waist band portions at opposite ends of the blank remote from the crotch, the drawers including a reinforcing piece extending across the crotch over parts of the front and rear portions and attached to the latter portions, and a film of plastics material, impervious to moisture, inserted between the blank and the reinforcing piece.

An intermediate space is formed in this manner between the material of the reinforcing piece and the plastic foil, in which space in case of necessity a sanitary napkin or cotton pad can be inserted. These drawers have the advantage that the sanitary napkin can be carried in the drawers without requiring separate additional supporting means for the napkin.

The drawers can be supplied by the manufacturers with or without a napkin insert. It is not necessary to change the sanitary napkin, since after use, the drawers are discarded and replaced by new ones.

Preferred embodiments of the invention are now described by reference to the accompanying drawings, in which:

Figure 1 shows diagrammatically a pair of drawers of the kind usually known as briefs in position of use,

Figure 2 is a plan view of the blank of material used for making the panties,

Figures 3 to 6 are sectional views taken along the line III—III of Figure 2 of several modifications of blanks,

Figure 7 is a perspective view of a further modification of the invention,

Figure 8 is a plan view of the blank from which the panties of Figure 7 is made,

Figure 9 shows a diagrammatic longitudinal section through the blank of Figure 8,

Figure 10 is a similar section showing the blank with a napkin insert, and

Figure 11 shows a detail drawn to a larger scale.

For making the briefs shown in Figure 1, a blank according to Figure 2 is used. This blank consists of a single piece of cellulose or other non-woven fabric 2 having a pair of waist band portions 3 and front and rear portions 4 and 5 which taper towards a crotch between the portions 4 and 5. The corresponding ends of the waist band portions 3 are attached to each other by elastic bands 6 sewn to the ends of the portions 3. A reinforcing piece 7 which preferably also consists of non-woven fabric is sewn partially along the edges of the front and rear portions 4 and 5 across the crotch by means of stitches 8. A very thin plastics film 9 is inserted between the reinforcing piece 7 and the material of the blank prior to the stitching operation and is attached by the stitches 8, at the same time as the reinforcing piece, to the blank.

The described briefs have the advantage that they can be used together with a sanitary napkin without requiring a special support for the napkin or additional holding means. As shown in Figure 3, a napkin 10 can be inserted into the space between the reinforcing piece 7 and the plastics film 9. The plastics film is impervious to moisture or menstruation fluid and prevents any soiling of underwear or clothes. A change of the sanitary napkin is not required when using the described disposable

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briefs; after use the briefs with the napkin are thrown away and new briefs with a fresh napkin already inserted will be used.

- In the example according to Figure 6 each 5 of the front and rear portions of the briefs is provided with a transversely extending slit 11 immediately above the edges of the reinforcing piece 7, the slit extending parallel to the 10 waist band 3 and its length corresponding to the width of a napkin. The two ends of a napkin or of a cotton pad 11a can be pulled through the two slits, so that the pad is secured in its position. After use, the non-woven fabric briefs together with the sanitary napkin or pad 11a are discarded.

- As shown in Figure 4, the napkin 10 can also be arranged at the inner side of the reinforcing piece 7. It is for example possible to use an ordinary separate napkin, the plastics film 9 in this case giving additional protection against soiling of the clothes of the wearer.

- The briefs obviously can be worn also without any sanitary napkin, as shown in Figure 5. For closing the waist band 3, extendable waist bands may be used which are provided with loops, or buttons, eyelets, etc.

- The embodiment of the briefs according to Figures 7 to 11 again comprises a blank of non-woven cellulose fabric 12 with two inwardly-turned waist band portions 13, a front portion 14 and a rear portion 15. A reinforcing piece 16, also made of non-woven cellulose fabric extends from a crotch over the major portion of the length of the front and back portions. The reinforcing piece extends laterally to the two side edges of the blank and is attached to the blank by seams 17 along the edges thereof. The seams 17 also serve to attach a thin plastics film 18, which is substantially co-extensive with the reinforcing piece 16 and extends laterally to the side edges defining eventual leg opening 19 and 20.

- The ends of the waist band portions 13 are connected to each other with waist band strips 21 and 22. Each waist band strip comprises a folded non-woven cellulose strip defining two webs 24 and 25 (Fig. 11) which engage over one end of each waist band portion 13 and is sewn thereto by stitches 26 and 27. These stitches extend around the entire waist band of the briefs and serve at the same time to sew two resilient rubber strings 28, 29 in pretensioned condition along the inside of the inwardly turned portions of the waist band. After sewing of the rubber strings to the material of the waist bands and subsequent relief of the tension in the rubber strings, the waist band shrinks as shown in Figure 7, so

that the waist band adapts to the waist of the wearer of the briefs.

Also the above described embodiment of the briefs can be worn with or without a sanitary napkin, as shown in Figures 8 and 9. After use, the briefs together with the napkin are discarded.

WHAT I CLAIM IS:—

1. Disposable drawers made from a blank of cellulose or like non-woven fabric, the blank having front and rear portions on opposite sides of a crotch and waist band portions at opposite ends of the blank remote from the crotch, the drawers including a reinforcing piece extending across the crotch over parts of the front and rear portions and attached to the latter portions, and a film of plastics material, impervious to moisture, inserted between the blank and the reinforcing piece.

2. Drawers according to Claim 1, wherein the reinforcing piece and the film extend over the entire width of the blank and are attached along the edge margins of the front and rear portions.

3. Drawers according to Claim 1 or 2, including a sanitary napkin or pad inserted between the reinforcing piece and the film.

4. Drawers according to Claim 1, or 2, wherein each of the front and rear portions has a slit extending parallel to the waist band portions adjacent the reinforcing piece for receiving a respective end of a sanitary napkin or pad.

5. Drawers according to Claims 1 or 2, in which the waist band portions are interconnected by elastic means.

6. Drawers according to any one of Claims 1 to 4, in which the waist band portions are interconnected by a pair of strips of cellulose or other non-woven fabric so as to form a continuous waist band, elastic strings being sewn in pretensioned condition to said strips, so that the waist band contracts after sewing the strings to the strips.

7. Drawers according to Claim 6, in which each strip serving to interconnect the waist band portions of the blank comprises a folded piece of material which engages over an end part of each waist band portion and is sewn thereto.

8. Disposable drawers substantially as described and as illustrated in the accompanying drawings.

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Fig. 1

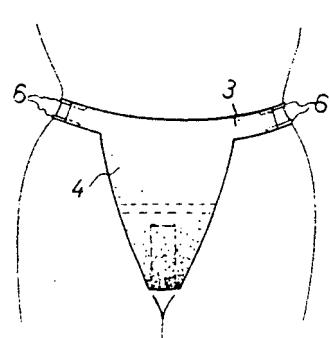


Fig. 2

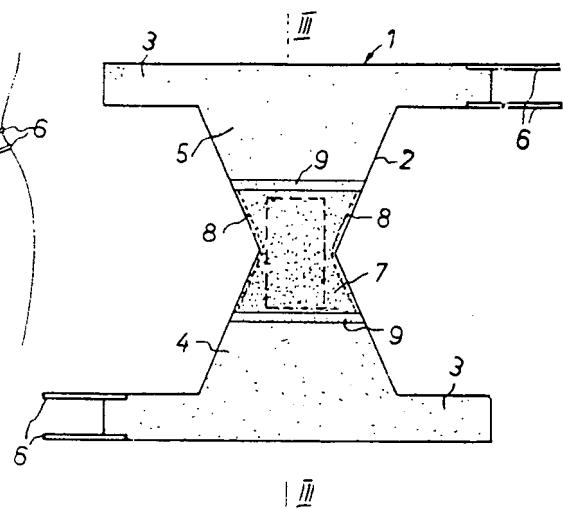


Fig. 3

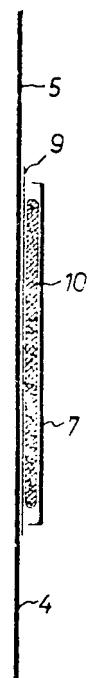


Fig. 4

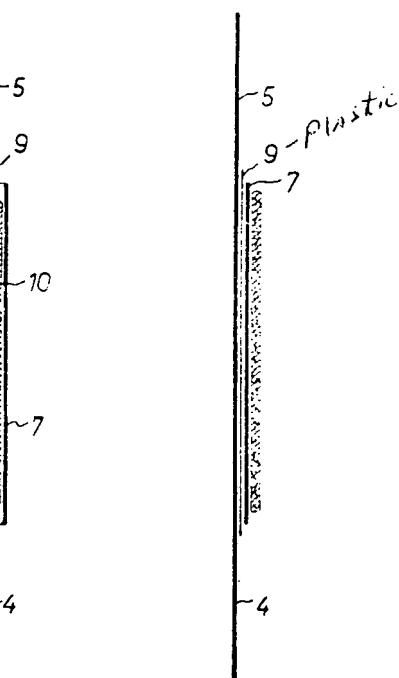
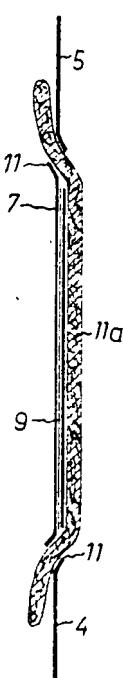


Fig. 5



Fig. 6



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2 SHEETS
COMPLETE SPECIFICATION
This drawing is a reproduction of
the Original on a reduced scale
Sheets 1 & 2 -

